REMARKS

This amendment responds to the Office Action which was mailed on December 4, 2002. It was noted that Figure 1 contains a sequence disclosure and that the application failed to comply with the requirements of 37 CFR 1.821 through 1.825. A separate sequence listing and computer readable copy in accordance with requirements is provided herewith and the specification has been amended to include a reference to SEQ ID NO: 1. In the claims, Claims 1-15 have been canceled and new Claims 31-38 have been substituted therefor. It is respectfully submitted that new Claims 31-38 are in condition for allowance. Request a favorable reconsideration of this application in light of the amendments and the remarks set forth below which constitute a full and complete response to the outstanding Office Action.

It is requested that the order of the inventor's names be changed such that Ronald J. Young is the first named inventor, Julian E. Davies the second inventor, and Richard Kao the third inventor. The effort of the examiner to carry out this change is greatly appreciated.

In the Office Action Claims 1-13 and 15 were rejected under 35 U.S.C. § 112, first paragraph because the specification does not reasonably provide enablement for the detection of ribosome inhibiting proteins without N-glycosidase activity. Claims 1-13 and 15 have been canceled and new Claims 31-38 substituted therefor. Claim 31 includes as a limitation "ribosome inactivating protein having N-glycosidase activity," therefore the rejection for lack of enablement should now be withdrawn. Applicant's method, as described in the specification, is directed towards the detection of Type II ribosome inactivating proteins which have N-glycosidase activity. It is essential that the protein being detected have this activity as is now recited in Claim 31.

It was also unclear to the examiner whether and to what extent adenine analogs or derivatives could be used since the GAGA tetraloop has been changed. First of all, it should be understood that adenine base derivatives and analogs must have the adenine ring structure and could not include the bases G, C, T, U, and I. Further, absolute integrity of the GAGA sequence is required for detection of type II RIP toxin, as any transition or transversion of any nucleotide in the sequence abolishes its N-glycosidase activity. In any event, Claim 31 has now been amended to recite 2-aminopurine as the adenine analog. This should obviate any rejection based on lack of enablement for the use of adenine analogs and derivatives.

Claims 1-5 and 13 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kao et al. Claims 1-5 and 13 have now been canceled and new Claims 31-38 substituted therefor. Claim 31 includes as a limitation the adenine analog 2-aminopurine as "A_x" in the GA_xGA tetraloop. 2-aminopurine possesses inherent fluorescence and provides an immediate fluorescence signal upon cleavage of the N-glycosidase bond of the 2-aminopurine in the A_x of the GA_xGA tetraloop and detection of ribosome inhibiting proteins. Kao et al. clearly does not teach the use of 2-aminopurine. Therefore, it respectfully submitted that new Claims 31-38 are not anticipated by Kao et al. and rejection for anticipation should be withdrawn.

Claims 1-5 and 13 were rejected under 35 U.S.C. § 102(f) asserting that applicant did not invent the claimed subject matter because Kao et al. included an additional coauthor T. Orton who was not listed as an inventor in the instant application. Here again, Claims 1-5 and 13 have been canceled, and new Claim 31 includes the limitation of 2-aminopurine not taught by Kao et al. Although T. Orton was a coauthor for the conference paper, she is not listed as a co-inventor because she did not contribute to the conception of the invention as defined in Claims 31-38. Therefore, it is respectfully submitted that new Claims 31-38 are in condition for allowance.

Claims 1-5 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Zamboni et al. as evidenced by Szewczak et al. However, Claims 1-5 have been canceled and new claims 31-38 substituted therefor. Claim 31 includes as a limitation the adenine analog 2-aminopurine as "A_x" in the GA_xGA tetraloop. This limitation is clearly not disclosed in Zamboni et al., therefore, it is respectfully submitted that Claims 31-38 are not anticipated by Zamboni and the rejection should be withdrawn.

Claims 1, 6, and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brigotti et al., in view of Kao et al., and Nuovo et al. Claims 1, 6, and 15 have been canceled and new Claims 31-38 substituted therefore. Brigotti when combined with Kao and Nuovo do not teach or suggest the limitations of Claim 31. Here again, Claim 31 includes as a limitation the use of the adenine analog 2-aminopurine in the GAGA tetraloop. In addition, it should be noted that 2-aminopurine is inherently fluorescent when used in the present method and immediately provides a fluorescent signal when released from the GAGA tetraloop without further treatment with reagents (see Claim 32). Hence, applicant's claimed method is not taught or suggested by the cited references, nor is any motivation provided for doing so. In fact, Brigotti is actually *not* directed towards the detection of Type II RIPs having N-glycosidase activity. The method disclosed in Brigotti is not capable of such detection as is stated in the last two paragraphs of the reference. Consequently, it is respectfully submitted that Claims 31-38 are patentable over the prior cited and are in condition for allowance.

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kao et al., as applied to Claims 1-5 and 13 above, and further in view of Eck et al. Claim 8 has been canceled and new Claims 31-38 substituted therefore. Claim 33 corresponds to Claim 8, but is dependent from Claim 31 which has been discussed in the foregoing and is patentable over the prior art

cited. Applicant concedes that use of methylation is a well-known and commonly used technique which predates the Eck et al. patent. However, this feature is merely covered as a dependent claim which is further limiting to independent Claim 31 which is in condition for allowance. Therefore, it is respectfully submitted that Claims 31-38 are patentable over the prior art cited and are in condition for allowance.\

In summary, Claims 1-15 have been canceled and new Claims 31-38 substituted therefor. Claims 31-38 remain in the case and based on the foregoing amendments and arguments should not be considered anticipated by or obvious over the prior art cited. Accordingly, it is respectfully submitted that these claims are patentable and in condition for allowance. Early reconsideration and withdrawal of the rejections is earnestly solicited, as is allowance of the claimed subject matter.

Respectfully submitted,

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DATE

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